

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Canceled).

2. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the carbonization takes place at a temperature greater than 800 °C, and very much preferred greater than 1000 °C.
3. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized by an initial first temperature treatment that at least partially softens or melts the fibres.
4. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the flat material is fixed in a tenter frame prior to the carbonization process.
5. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the staple fibers are suspended in a solvent preferably water, to form a pulp and are then fibrillated.

6. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 4~~, characterized in that the fibers are fibrillated in a refiner.
7. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 5~~, characterized in that the pulp dilution in the refiner is approximately 0.1 to 0.01 %, preferably 0.05 to 0.02%.
8. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 4~~, characterized in that a mixture of fibrillated and non-fibrillated fibers is used.
9. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the fibrillated fibers are processed into webs with, a substance weight typically between 45 to 150g/m².
10. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that fibers with a Titer of up to 15 dtex maximum, preferably up to 8 dtex maximum and especially preferred with a Titer of up to 3.0 dtex maximum are used.
11. (Withdrawn and Currently Amended) The material ~~A-process~~ according

to claim 19, ~~claim 1~~, characterized in that fibers with cut lengths between 4 and 40 mm, preferably between 8 and 12 mm are used to produce the continuous web.

12. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that synthetic fibers of at least a first and a second type are used.

13. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 12~~, characterized in that the fibers of a second type contain fractions of at least one noble metal or other additive, e.g. a synthetic additive.

14. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the calendaring is carried out at raised temperatures.

15. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, ~~claim 1~~, characterized in that the web or material is calendared at least twice prior to the carbonization and such that all of the material is densified in a first calendaring step and at least one of the two opposite paper surfaces is changed into a film-like, porous material

by melting the fibrillated fibers in a second calendaring step.

16. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, claim 1, characterized in that the heat and pressure are selected. such that the calendared micro porous material has pore sizes of $< 5 \mu\text{m}$, preferably $< 2 \mu\text{m}$.
17. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, claim 1, characterized in that synthetic fibers such as acrylic or Aramid fibers are used.
18. (Withdrawn and Currently Amended) The material ~~A-process~~ according to claim 19, claim 1, characterized in that non-crystalline fibers are used as synthetic fibers.
19. (Currently Amended) A fibrous, flat and electrically conducting porous material ~~obtained from~~ made of synthetic fibers, in particular synthetically spun fibers (e.g. acrylic fibers), said material being formed by:
first fibrillating staple fibers having preferably a
specific length;
forming the fibrillated staple fibers into a
continuous web in a paper manufacturing process,
preferably by means of an inclined wire wet laid paper

machine,

characterized in that the continuous web is
calendared at least once prior to its carbonization and
then carbonized/graphitized through heating at a
temperature of greater than 600 °C, to obtain electrical
conductivity; a process according to claim 1 further

said material being characterized in that the material has a core having
a first porosity and at least one cover layer having a second porosity, said
second porosity being less porous than the first porosity.

20. (Previously Presented) A material according to claim 19, characterized
by a fibrous core and at least one micro porous flat cover layer on one
side of the material that is more dense than the fibrous region.
21. (Previously Presented) A material according to claim 19, characterized
in that the surfaces of the material opposite one another are micro
porous flat cover layers that are more dense than the fibrous region.
22. (Previously Presented) Non-woven fabric comprising
carbonized/graphitized polymeric fibres characterized in that the fabric
has a core having a first porosity and at least one cover layer having a
second porosity, said second porosity being less porous than the first
porosity.

23. (Previously Presented) Non-woven fabric according to claim 22, characterized in that the fabric consists essentially of carbonized/graphitized polymeric fibres.
24. (Previously Presented) Non-woven fabric according to claim 22, characterized in that, the fabric is coated with a catalyst layer
25. (Previously Presented) Non-woven fabric according to one of characterized in that, the fabric is micro porous.
26. (Previously Presented) Non-woven fabric according to claim 22, characterized in that, the fabric is made from one single web or layer.
27. (Previously Presented) Non-woven fabric according to claim 22, characterized in that, such a fabric is made from two or more single webs and laminated to a single web.
28. (Withdrawn) Fuel cells containing at least two gas diffusion layers separated by an ionically-electrically conducting layer separating wall (PEM membrane), said gas diffusion layers being coated with at least one catalyst. characterized in that, each gas diffusion layer is formed at least in part from a material having a fibrous core and at least one micro

porous flat cover layer on one side of the material that is more dense than the fibrous region and a non-woven fabric consists essentially of carbonized/graphitized polymeric fibres .

29. (Currently Amended) Use of a material obtained according to claim 28 ~~claim 1~~ and a non-woven fabric comprising carbonized/graphitized polymeric fibres characterized in that the fabric has a core having a first porosity and at least one cover layer having a second porosity, said second porosity being less porous than the first porosity as a micro porous support for a membrane, in particular a PEM membrane.